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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/668,219 | 09/22/2000 | Yunzhou Li | 2204/A42 | 9843 |

2101 7590 03/18/2004
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EXAMINER

LY, ANH VU H

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
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2667

DATE MAILED: 03/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/668,219

Applicant(s)

LI, YUNZHOU

Examiner

Anh-Vu H Ly

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-57 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-57 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

1. Claims 24-29, 37-44, and 51-57 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. ‘A computer program for controlling a computer system’ as recited in independent claims 24, 37, and 51 is non-statutory subject matter. The computer program must reside and/or store in a medium and cause an action to be carried out. Here, the action to be carried out is claimed in independent claims 24, 37, and 51. However, the medium for storing such program is not recited in independent claims 24, 37, and 51. Dependent claims 25-29, 38-44, and 52-57 are rejected as they depend upon rejected independent claims 24, 37, and 51.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-57 are rejected under 35 U.S.C. 102(e) as being anticipated by Andersson et al (US Pub No. 2002/0004843 A1). Hereinafter, referred to as Andersson.

With respect to claims 1, 6, 13, 19, 24, 30, 37, 45, and 51, Andersson discloses in Fig. 1, a communications system in which node A has plurality of interfaces Ib and Id for connecting to nodes B and D (a networking device having a plurality of communication interfaces). Andersson discloses in Fig. 2, a forwarding table having a primary path and a corresponding recovery path; wherein, the communication network pre-computes (bridged routing entry is created before requiring a bridge) recovery paths to protect various primary paths. Further, as shown in Fig. 2, destination C is designated with two outgoing interfaces B (first communication interface) and D (second communication interface), wherein, B is the primary interface and D is the alternate interface (creating a bridged routing entry for bridging a first communication interface and a second communication interface before requiring a bridge between the predetermined pair of communication interfaces). Herein, destination C is considered as one entry by the examiner even though destination C comprising two rows in the table. Andersson discloses in page 3, paragraph 48 that, upon detecting a network failure, the network nodes switch certain communications to one or more recovery paths in order to bypass the network failure. This implies that the network node should or should not switch to the backup interface as a function of the network changes in the communication system (subsequently determining that a bridge is needed between the first communication interface and the second communication interface). Andersson discloses in Figs. 3A-C, different techniques employed by the network nodes for switching to the backup interface when the primary interface fails (establishing the bridge between the first communication interface and the second communication interface using the bridged routing entry).

With respect to claims 2, 7-8, 14-15, 20, 25, 31-32, 38-39, 46-47, and 52-53, Andersson discloses in Fig. 2, destination C is designed with two outgoing interfaces B and D (adding second communication interface as an outgoing interface to a routing entry having first communication interface as an outgoing interface). Herein, destination C is considered as one entry by the examiner even though destination C taking two rows in the table.

With respect to claims 3, 9, 16, 21, 26, 33, 40, 48, and 54, the limitation “creating a bridged routing vector for bridging the first communication interface and the second communication interface” is inherent to Andersson. As shown in Fig. 2, an entry of forwarding table comprising a primary interface and the backup interface. Further, Andersson discloses in Figs. 3A-C, different techniques employed by the network nodes for switching to the backup interface when the primary interface fails. For the switching fabrics of the network nodes to implement the switching of data from primary interface to backup interface, the forwarding table is transformed into forwarding vector and implemented by the switching fabric.

With respect to claims 10, 17, 34, 41, 49, and 55, Andersson discloses in Fig. 2 that, destination C is indicated twice (reference to destination C of the primary interface) in both rows of the forwarding table.

With respect to claims 4, 11, 22, 27, 35, 42, Andersson discloses in page 3, paragraph 48 that, upon detecting a network failure, the network nodes switch certain communications to one

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or more recovery paths in order to bypass the network failure (detecting a failure affecting communications over the first communication interface).

With respect to claims 5, 12, 18, 23, 36, 50, Andersson discloses in Fig. 1, a communications system in which node A has plurality of interfaces Ib and Id for connecting to nodes B and D (plurality of communication interfaces comprising a plurality of line cards).

With respect to claims 28-29, 43-44, and 56-57, Andersson discloses a system, device, and method for bypassing network changes in a routed communication network, therefore, such method is stored in the memory of the network nodes (program embodied in a computer medium) and such instruction is carried by a signal within the network nodes (program embodied in a data signal).

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Galand et al (US Pub No. 2004/0042402 A1) discloses method and system for a local and fast NDPS in high-speed packet switching networks.

Cao et al (US Pub No. 2002/0181485 A1) discloses apparatus and method for Internet protocol flow ring protection switching.

Jardetzky et al (US Patent No. 6,392,989 B1) discloses high-speed protection switching in label switched networks through pre-computation of alternate routes.

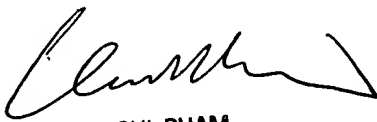
Weil et al (US Pub No. 2002/0093954 A1) discloses failure protection in a communications network.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh-Vu H Ly whose telephone number is 703-306-5675. The examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 703-305-4378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

avl


CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 3/16/07